

WHAT IS CLAIMED IS:

1. A pneumatic rubber tire having a carcass with circumferential rubber tread and associated sidewalls, wherein said tread and a portion of said sidewalls are of a lug and groove configuration designed to be ground-contacting, wherein said lug and groove configuration extends from said tread over at least thirty, percent of the tire sidewall adjacent to said tread, and wherein

(A) the said lug and groove configured portion of said sidewall is of a rubber composition which comprises, based on 100 parts by weight rubber (phr),

(1) elastomers comprised of

(a) about 40 to about 80 phr of cis 1,4-polyisoprene natural rubber and

(b) about 20 to about 60 phr of cis 1,4-polybutadiene rubber,

(2) about 55 to about 80 phr of reinforcing filler comprised of carbon black and precipitated silica which is comprised of

(a) about 5 to about 40 phr of carbon black having an Iodine value (ASTM D1510) of about 35 to about 85 g/kg and a dibutylphthalate (DBP) value (ASTM D2414) of about 70 to about 130 cm³/100g and

(b) about 10 to about 70 phr of precipitated silica having a BET surface area of about 125 to about 200 m²/g; wherein the weight ratio of silica to carbon black is in a range of about 0.3/1 to about 3/1, and wherein said rubber composition is exclusive of carbon blacks having an Iodine value greater than 85 g/kg, and

(3) a coupling agent having a moiety reactive with silanol groups on said silica and another moiety interactive with said elastomers, and

(B) wherein the rubber composition of said circumferential tread, other than said rubber composition of said lug and groove configuration of said tire sidewall, is comprised of, based on 100 parts by weight rubber (phr):

(1) at least one diene based elastomer selected from polymers of isoprene and 1,3-butadiene and their mixtures and copolymers of isoprene, 1,3-butadiene and their mixtures with styrene,

(2) about 30 to about 95, alternately about 40 to about 75, phr of carbon black having Iodine value in a range of about 100 to about 145 g/kg and a DBP value in a range of about 110 to about 145 cm³/100g; wherein said tread rubber composition is exclusive of silica and coupling agent,

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wherein said tread rubber composition is exclusive of carbon black reinforcement having an Iodine value of about 35 to about 85 g/kg and a dibutylphthalate (DBP) value of about 70 to about 130 cm³/100g.

10 2. The tire of claim 1 wherein said lug and groove configuration extends from said tread over at least fifty percent of the tire sidewall adjacent to said tread.

15 3. The tire of claim 1 wherein said lug and groove configuration extends from said tread over the tire sidewall adjacent to said tread to at least the maximum section width of the tire.

4. The tire of claim 1 wherein said sidewall rubber composition is exclusive of elastomers having a Tg in a range of about -70°C and -100°C.

20 5. The tire of claim 2 wherein said sidewall rubber composition is exclusive of elastomers having a Tg in a range of about -70°C and -100°C.

25 6. The tire of claim 3 wherein said sidewall rubber composition is exclusive of elastomers having a Tg in a range of about -70°C and -100°C.

7. The tire of claim 1 wherein the carbon black reinforcing filler for the rubber composition of said lug and groove configured sidewall is exclusive of carbon blacks having an Iodine value greater than 85 g/kg.

30 8. The tire of claim 1 wherein said sidewall rubber composition is exclusive of trans 1,4-polybutadiene, 3,4-polyisoprene, and high vinyl polybutadiene elastomer having a vinyl content of greater than fifty percent.

9. The tire of claim 1 wherein said sidewall rubber composition contains about 5 to about 15 phr of at least one additional elastomers selected from at least one of isoprene/butadiene copolymer rubber, synthetic cis 1,4-polyisoprene rubber and emulsion polymerization prepared styrene/butadiene copolymer rubber.

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10. The tire of claim 2 wherein said sidewall rubber composition contains about 5 to about 15 phr of at least one additional elastomers selected from at least one of isoprene/butadiene copolymer rubber, synthetic cis 1,4-polyisoprene rubber and emulsion polymerization prepared styrene/butadiene copolymer rubber.

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11. The tire of claim 3 wherein said sidewall rubber composition contains about 5 to about 15 phr of at least one additional elastomers selected from at least one of isoprene/butadiene copolymer rubber, synthetic cis 1,4-polyisoprene rubber and emulsion polymerization prepared styrene/butadiene copolymer rubber.

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12. The tire of claim 1 wherein, for said sidewall composition, said coupling agent is a bis-(3-trialkoxysilylalkyl) polysulfide which contains from 2 to 8, with an average of about 3.5 to about 4.5, sulfur atoms in its polysulfidic bridge.

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13. The tire of claim 3 wherein, for said sidewall composition, said coupling agent is a bis-(3-trialkoxysilylalkyl) polysulfide which contains from 2 to 8, with an average of about 3.5 to about 4.5, sulfur atoms in its polysulfidic bridge.

14. The tire of claim 1 wherein, for said sidewall composition, said coupling agent is a bis-(3-triethoxysilylpropyl) tetrasulfide material.

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15. The tire of claim 1 wherein, for said sidewall composition, said coupling agent is a bis-(3-trialkoxysilylalkyl) polysulfide which contains from 2 to 8, with an average of about 2 to about 2.6, sulfur atoms in its polysulfidic bridge.

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16. The tire of claim 1 wherein, for said sidewall composition, said coupling agent is a bis-(3-triethoxysilylpropyl) polysulfide material with an average of from 2 to 2.6 sulfur atoms in its polysulfidic bridge.

